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10. (Twice Amended) The article of claim 1, wherein the seal formed by the cured polymer layer prevents a cryogenic fluid at a pressure of at least about two bar from infiltrating into the ceramic superconductor through the outer surface of the ceramic superconductor.

11. (Twice Amended) The article of claim 10, wherein the seal formed by the cured polymer layer prevents a cryogenic fluid at a pressure of at least about 10 atmospheres from infiltrating into the ceramic superconductor through the outer surface of the ceramic superconductor.

12. (Twice Amended) A superconducting article, comprising:
a ceramic superconductor in the form of a superconducting tape, the ceramic superconductor having a length and an outer surface along its length; and
a sealing structure comprising a cured polymer layer that is applied to the outer surface of the ceramic superconductor to form a seal that permits the article to withstand thermal cycling when exposed to a fluid cryogen at a pressure of at least about one atmosphere without degrading the current carrying capability of the ceramic superconductor by more than 10%,

wherein the superconducting article is in the form of a cable.

24. (Once Amended) The article of claim 12, wherein the seal formed by the cured polymer prevents a cryogenic fluid at a pressure of at least about two bar from infiltrating into the ceramic superconductor through the outer surface of the ceramic superconductor.

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25. (Once Amended) The article of claim 12, wherein the seal formed by the cured polymer prevents a cryogenic fluid at a pressure of at least about 10 atmospheres from infiltrating into the ceramic superconductor through the outer surface of the ceramic superconductor.--